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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

VO, TED T

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,980

Applicant(s)

CASATI ET AL.

Examiner

Ted T. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This action is in response to the Amendment filed on 07/26/2004 responsive to Office action mailed on 05/06/04.

Claims 1, 3, 13, and 23 are amended. Claim 2 is canceled. Claims 1 and 3-38 are pending in the application.

Claims 1 and 3-38 stand finally rejected as being anticipated by Casati et al., "eFlow: A Platform for Developing and Managing Composite E-Services".

Response to Arguments

2. Applicants' arguments (remarks: pages 11-16) with respect to Claims 1 and 3-38, which are rejected under 35 U.S.C. 102(b) as being anticipated by Casati et al., have been fully considered. However, the arguments are not persuasive.

For example, In page 12, lines 9-18, Applicants with regards to Claims 1, 3, 13-18, 24, 25, 28, 29, 36 37 argue that "method nodes" are not mentioned in the reference, and with regards to Claim 33 argue that "...expansion of each of said generic electronic service into said operation..." is a concept of having service nodes with "executable operation inherent...". Applicants pick FIG. 4 and argue that each box is a service, not inherent "executable operation".

Examiner disagrees.

First of all, with regard to newly added limitation "*method nodes, wherein each of said method nodes is a representation of executable operations inherent to a consumer service represented by one of said service nodes*" in Claim 1 (and recited in such manners in independent Claims 23, 28, 29, 33, and 37), Examiner has cited Figure 7, that includes a generic node of a service. For example, Figure 7 shows Furniture Moving Services - the services defined in a dash box and are expanded under a process definition that is followed by new instance. The generic node that represents Furniture Moving Services has means of "service node". Each node/box in the process definition (that will be followed by new

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instance) has means of "method node" and expansion. Furthermore, in section 3, the reference describes about "service execution and data exchange" (representation of executable operations), and about "service execution and data exchange" (representation of executable operations). All these Examiner's citations have not been directly responded, but instead, Applicants pick FIG. 4 and argue that each box is a service, not inherent "executable operation".

It is noted that the term "node" simply is only a label. In object-oriented programming, a method or method node is a common term and is a programmed procedure that is defined as part of a class and included in any object of that class. The execution of methods is invoked at runtime as instantiation. Clearly, the process definition shown in FIG. 7 has means of method nodes. Yes, FIG. 4 shows each box to represent a service; however, behind this service is code of execution and this execution is shown in the reference. The "new instance", for example, mentioned in FIG.7 is done by only computer code. That code is behind a label such as label "Storage space rental", in that process definition. Such execution is also seen in numerous citations in reference. For example, in page 343, Section 3, right column, "Service nodes represent the invocation of a basic or composite service", "decision nodes specify the alternatives and rules controlling the execution flow", and in the last 2 lines of this column, "after parallel service execution"; in page 344, right column, section 4.1, first paragraph, "an executionMode attribute of the generic service node", in the last paragraph of this column, "execution time", etc.

Furthermore, with regard to Claim 33 (and so as Claim 3), as cited by previous action, Figure 7 discloses "...expansion of each of said generic electronic service into said operation...", and this citation has not directly responded by Applicants.

With regards to Claim 4 (remarks: page 13), Applicants argue page 341 (right col.) has only a generic statement about "service composition".

Examiner disagrees: At first, the limitation, *wherein each of said service nodes is executed by accessing an electronic service registered on an electronic service platform*, recited in dependent Claim 4 and in such manners in dependent Claims 13, 26, and 29, is broad. Therefore, the claims are interpreted as broadly as their term reasonably allows. Page 341, right column, first full paragraph, "we have

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developed a platform, called eFlow", and also many discussions for execution of generic nodes and process definition as shown above in addressed to Claim 1, teach such broad limitation.

With regards to Claim 5 (remarks: page 13), Applicants argue FIGURE 7 makes no reference to aspect of service nodes that contain as part of their definition "Consumer service-level properties" described meta-service e-service, referred to as Composition E-service.

Examiner responds: As noted above, Page 341, right column, the reference referred to Composite E-service. And again, Claim 5 merely recites, "*each of said service nodes comprises: consumer service-level properties*". Such broad "properties" is interpreted as broadly as this term reasonably allows. FIGURE 7, shows each label as service-level property of an e-service node.

With regards to Claim 6 (remarks: page 13), Applicants argue FIGURE 7 merely shows replacing generic box/nodes with a process fragments at process instantiation time, having nothing to do with resolving "service node".

Examiner responds: Claim 6 merely recites, "*consumer service-level properties comprises: a service search recipe or service selection rule*". Such broad "service selection rule" is interpreted as broadly as this term reasonably allows. FIGURE 7, shows a computer user who selects each service node (as a check box beneath a service level). Moreover, in page 345, section 4.2, the reference discloses that the definition of service instances is performed through a very simple migration language consisting a set of rules.

With regards to Claim 7 (remarks: page 14), "*wherein said consumer service-level properties comprises: a service reuse*", Applicants argue the reference describes a different type of "reuse".

Examiner responds: The argument would not be persuasive, because the limitation merely recites "*a service reuse*".

With regards to Claims 8-12 (remarks: page 14), As Applicants pointed out that the Claims define a new e-service which is a newly formed composition from e-service nodes.

Examiner responds: In page 341, right Column, first full paragraph, it shows "e-service", "composite e-service" "eFlow", all these terms disclose such a newly formed composition from the e-service nodes.

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With regards to Claim 23 (remarks: page 16), Applicants' argument is that HPL paper is not describing "a composite service forming a generically defined flow for said process" and "wherein each of said service nodes is representative of a respective service invocation setup phase for each of the individual services."

Examiner responds: As it is noted that Independent Claim 23 recites the code that performs the model as recited in Claim 1. The rejection of this Claim has the same rationale as set forth in connecting to Claim 1. Since Examiner reasoned and cited in the previous action that the reference discloses means of "method nodes" such as execution in a definition process of an E-Service (FIG.7) as discussed in Claim 1 above, where the limitations "a composite service forming a generically defined flow for said process" and "wherein each of said service nodes is representative of a respective service invocation setup phase for each of the individual services" are corresponding to the limitations as recited in the Claim 1.

All Applicants' arguments in Remarks sections are fully considered. Since the arguments are not directly to the citations, and not persuasive, the rejection in the previous action will be maintained and given hereafter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Casati et al., "eFlow: A Platform for Developing and Managing Composite E-Services", IEEE, April 2000.

As per claim 1: Casati discloses,

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"A model for compiling a specification of a process definition comprising:

service nodes, wherein each of said service nodes is a representation of a consumer service

(See page 344, right column section 4.1, referring to "generic service node"; for example, "Furniture moving services");

a first flow diagram sequencing said service nodes as a representation of the process definition

(see page 346, the flow in the Figure 7, referring to "generic Process Definition"); and

method nodes, wherein each of said method nodes is a representation of executable operations inherent to a consumer service represented by one of said service nodes" (see Figure 7, for example, "Storage Space rental" [method node]; see page 342, left column, first full paragraph, "different eMove services", see section 3, "service execution and data exchange" [representation of executable operations], see page 343, section 3, "service execution and data exchange" [representation of executable operations]).

As per claim 3: Casati discloses, *"The model as set forth in claim 1 further comprising: wherein each of said service node is expandable into a second flow diagram of method nodes"* (see Figure 7, for example, the diagram shown with "process definition", or See Figures 2-3, referring to Emove Levels).

As per claim 4: Casati discloses, *"The model as set forth in claim 1 wherein each of said service nodes is executed by accessing an electronic service registered on an electronic service platform"* (See page 341, right column, first full paragraph, "eFlow").

As per claim 5: Casati discloses, *"The model as set forth in claim 1 wherein each of said service nodes comprises: consumer service-level properties"* (For example, see Figure 7, referring to "Furniture Moving Service").

As per claim 6: Casati discloses, *"The model as set forth in claim 5 wherein said consumer service-level properties comprises: a service search recipe or service selection rule"* (For example, see Figure 7, service search recipes for Furniture Moving Services is a sub set of its service node).

As per claim 7: Casati discloses, *"The model as set forth in claim 5 wherein said consumer service-level properties comprises: a service reuse"* (See page 345, section 5, referring to "service data repositories").

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As per claim 8: Casati discloses, *"The model as set forth in claim 5 wherein said consumer service-level properties comprises: a service-inherent method flow"* (For example, see Figure 1, "service provide B" where "B" is inherent in Billing, Credit card Verification, Credit check, etc.).

As per claim 9: Casati discloses, *"The model as set forth in claim 1 wherein each of said service nodes comprises: consumer authentication properties"* (See Figure 1, In Service Provider B, such a "Billing", "Credit card Verification", or "Credit check", etc., requires consumer authentication properties).

As per claim 10: Casati discloses, *"The model as set forth in claim 1 wherein each of said service nodes comprises: consumer and service certification properties"* (See Figure 1, In Service Provider B, for example, such a "Storage Space rental", or "Truck rental", etc., requires consumer certification properties).

As per claim 11: Casati discloses, *"The model as set forth in claim 1 wherein each of said service nodes comprises: service-level exception handling rules"* (See page 345, left column, section 4.2, first paragraph).

As per claim 12: Casati discloses, *"The model as set forth in claim 1 wherein each of said service nodes comprises: the definition of interaction flow, defining how the interaction with the service is conducted"* (See page 345, left column, section 4.2, first paragraph, "new laws or business policies").

As per claim 13: Casati discloses, *"The model as set forth in claim 1 wherein each of said method nodes comprises: representations of a service operation including operations executed within the context of at least one of said service nodes registered with a electronic services platform"* (See page 344, right column, see last paragraph, and referring "eFlow" as electronic service platform).

As per claim 14: Casati discloses, *"The model as set forth in claim 13 each of said method nodes further comprises: the service operation to call"* (See pages 342-343, referring to Emove Levels).

As per claim 15: Casati discloses, *"The model as set forth in claim 13 each of said method nodes further comprises: invocations for a specific operation of the method node"* (See page 343, section 3, see right column, last paragraph, "parallel invocation").

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As per claim 16: Casati discloses, *"The model as set forth in claim 13 each of said method nodes further comprises: input data, including formatting and handling specifications"* (See page 346, Figure 7, referring to "data collection").

As per claim 17: Casati discloses, *"The model as set forth in claim 13 each of said method nodes further comprises: output data, including formatting and handling specifications"* (See page 346, Figure 7, referring to "data collection").

As per claim 18: Casati discloses, *"The model as set forth in claim 13 each of said method nodes further comprises: method-level exception handling rules"* (See page 344, left column, see section 4.2, first paragraph).

As per claim 19: Casati discloses, *"The model as set forth in claim 1 wherein said specification is a composition of individual electronic services"* (See abstract, referring to "composite").

As per claim 20: Casati discloses, *"The model as set forth in claim 1 applied in a distributed computer network environment"* (See abstract, referring to "Web").

As per claim 21: Casati discloses, *"The model as set forth in claim 1 wherein said process is a workflow"* (See abstract, referring to "eFlow").

As per claim 22: Casati discloses, *"The model as set forth in claim 1 wherein said process is a composite electronic service"* (See abstract, referring to "composite e-service").

As per Claim 23: Regarding limitation: *"A computer tool for compiling a specification of a process comprising:*

computer code for representing a plurality of individual services as service nodes, wherein each of said service nodes is representative of a respective service invocation setup phase for each of the individual services; and computer code for compiling a set of the service nodes into a composite service forming a generically defined flow for said process", the claim is a computer tool that has claimed functionality corresponding to Claim 1. Claim is rejected in the same reason set forth in connecting to the rejection of Claim 1.

As per Claim 24: Regarding limitation: *"The computer tool as set forth in claim 23 comprising: said service nodes are expandable into method nodes, wherein method nodes are representative of at least*

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one respective operation inherent to a respective one of the individual services which is expanded thereto" (see Figure 7, for example, the diagram shown with "process definition", or See Figure 1, nodes surrounding Service Providers).

As per Claim 25: Regarding limitation: *"The computer tool as set forth in claim 24 comprising: said method nodes represent a plurality of inherent executable operations associated with a respectively associated one of the individual services"* (see Figure 7, For example, node "Storage space rental").

As per Claim 26: Regarding limitation: *"The computer tool as set forth in claim 23 comprising: each said service nodes provides executable functions related to setting up communication with each of said individual services"* (see page 341, section Introduction, right column, referring to "invoking several other basis or composite services").

As per Claim 27: Regarding limitation: *"The computer tool as set forth in claim 23 comprising: the composite service is a service node flow specifying generic functionalities common to said process"* (see Figure 1, page 342).

As per Claim 28: Regarding claim limitation:

"A computer tool for compiling a specification of a process and executing the specification of the process comprising:

computer code for representing a plurality of individual services as service nodes, wherein each of said service nodes is representative of a respective service invocation setup phase for each of the individual services (See action in Claim 1 above);

computer code for compiling a set of the service nodes into a composite service forming a generically defined flow of said process (See action in Claim 1 above);

computer code for executing the specification of the process represented by the generically defined flow by expanding each node of said set of the service nodes into method nodes (See action in Claim 3 above);

invoking functionalities of the individual services thereby, wherein each of said method nodes represent a plurality of inherent executable operations associated with a respectively associated one of the individual services" (See action in Claim 2 above).

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As per Claim 29: Casati discloses, *"A method for structuring individual electronic services registered on an electronic service platform, the method comprising:*

providing a top level having service nodes representative of extracted common elements of the composite service (Referring to "eFlow", or "Service Providers", shown in Figure 1)

providing a subsidiary level, wherein said service nodes are expanded into method nodes for execution of specific operations inherent to a respective electronic service represented thereby; (See Figure 7, Referring to "Furniture Moving Service") and

providing linking nodes in the top level for connecting said service nodes into a process flow, wherein said flow forms a hierarchical specification having a sequential series of said individual electronic services (See Figure s, 2, 3, 4 etc.).

As per Claim 30: Casati discloses, *"The method as set forth in claim 29 further comprising: providing event nodes"* (see Figure 7, for example, "Storage Space rental" [event node]).

As per Claim 31: Casati discloses, *"The method as set forth in claim 30 in an internet environment"* (Referring to the term e-service).

As per Claim 32: Casati discloses, *"The method as set forth in claim 31 further comprising: executing a process for providing electronic services over the internet environment by executing the hierarchical specification"* (See Figure 7).

As per Claim 33: Casati discloses,

"A method of executing a given composite process, defined as including a plurality of individual electronic services registered on an electronic services platform, the method comprising:

segregating generic electronic services common to the given composite process from operations respectively inherent to each of said generic electronic services (See Figure 1, or referring to e-Service);

compiling a composite process flow using said generic electronic services; (Referring to eFlow); and

invoking each operations functionalities of each of said generic electronic services by expansion of each of said generic electronic services into said operations only as needed to continue said composite process" (see Figure 7, for example, "Storage Space rental" [operations functionalities]. See page 342,

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left column, first full paragraph, "different eMove services" [expansion], and see section 3, "service execution and data exchange" [operations]).

As per Claim 34: Casati discloses,

"The method as set forth in claim 33, said compiling further comprising: compiling a plurality of the individual electronic services (eFlow) as associated with a search for data associated with said given composite process having at least one requirement from each of said individual generic electronic services" (value-added service, page 341, section 1).

As per Claim 35: Casati discloses,

"The method as set forth in claim 33, said compiling further comprising: compiling a composite process definition as a sequential series of service nodes, wherein each said service node is a specification related to invoking communications with a specific one of said service nodes" (See Figures 2-3, etc.).

As per Claim 36: Casati discloses,

"The method as set forth in claim 35 said executing further comprising: including method nodes for each of said service nodes wherein said method nodes are invocations of operations inherent with an associated one of the generic electronic services" (See page 343, section 3, see right column, last paragraph, "parallel invocation").

As per Claim 37: Casati discloses,

"A computer tool for composing electronic service searching runtime criteria comprising:

computer code for structuring a plurality of service nodes (See Figure 1), wherein each of said service nodes is representative of a generic service and includes only those criteria essential to invoking said service (See page 344, right column section 4.1, referring to "generic service node" such as Furniture moving services);

computer code for invoking a plurality of method nodes, wherein a set of method nodes is representative of operations inherent to an associated one of said service nodes (see Figure 7, for example, "Storage Space rental" [method node]; See page 342, left column, first full paragraph, "different eMove services", see section 3, "service execution and data exchange" [representation of executable

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operations], see page 343, section 3, "service execution and data exchange" [representation of executable operations]); and

computer code for linking nodes sequencing said service nodes into a coherent flow representative of a composite service including more than one generic service (See Figure s, 2, 3, 4 etc.).
As per Claim 38: Casati discloses, "The tool as set forth in claim 37 comprising; computer code for handing event nodes" (See page 345, left column, section 4.2, first paragraph).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3694. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from

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either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TUAN DAM
SUPERVISORY PATENT EXAMINER

TTV
Patent Examiner
Art Unit 2122
October 29, 2004